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July 9, 1996

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VIA HAND-DELIVERY

The Honorable Reed E. Hundt
The Honorable James H. Quello
The Honorable Rachelle B. Chong
The Honorable Susan Ness
Federal Communications Commission
1919 M Street, N.W.
Washington, DC 20554

RECEIVED
JUL - 9, 1996
Federal Communications Commission
Office of Secretary

Re: CC Docket 92-297
28 GHz Band Plan

Dear Mr. Chairman and Commissioners:

The FCC soon will adopt a spectrum band plan in the proceeding in the above-referenced docket. Texas Instruments, Inc. ("Texas Instruments"), along with many other parties,¹ continues to believe that the Commission's band plan "Option 4 Prime" will best serve the agency's goals of developing a viable local multipoint distribution service ("LMDS") and will generate adequate revenues in an LMDS auction. Texas Instruments is writing now to request that the Commission continue to study the possibility of reallocating spectrum below 27.5 GHz for LMDS, regardless of the plan adopted in the upcoming order.

Although allocated internationally to the fixed service -- and, thus, available to designate for LMDS -- the bands 25.25-27.0 GHz and 27.0-27.5 GHz are allocated to the fixed service in the United States only to federal government users.² According to a 1993 study by the National Telecommunications and Information Administration, these bands are

¹ See Letter from "LMDS Parties" (Bell Atlantic, Endgate Corporation, Comtech Associates, GHz Equipment Company, Hewlett-Packard Company, Telesis Technologies, Texas Instruments, Inc., WebCell Communications, Inc., and RioVision, Inc.) to William F. Caton (dated June 14, 1996).

² See 47 C.F.R. § 2.106 (1995).

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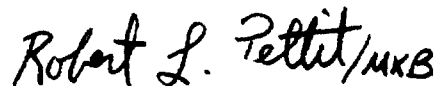
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virtually unused, having recently a total of 11 developmental and experimental assignments. The Navy is the major user, testing shipboard electronic systems.³

Apparently, the principal uses for the bands are in the future. According to a 1994 letter from NTIA's Deputy Associate Administrator, NASA plans to use the 27.0-27.5 GHz for space-to-space links associated with the Space Station. Even assuming that this project someday is funded, Texas Instruments believes that, at a minimum, this spectrum requirement should be reexamined.⁴ Indeed, the operational requirement for wideband video links was translated into a spectrum requirement before the advent of economical and efficient video compression technology. This technology will reduce the amount of spectrum needed to meet the same operational requirement.

Texas Instruments respectfully requests that the Commission decide, as a part of the upcoming order in this proceeding, to reopen discussions with NTIA to reexamine the federal spectrum requirements and the possibilities for federal/non-federal sharing in or reallocation of the 25.25-27.0 GHz and 27.0-27.5 GHz bands and to pursue those discussions at the earliest possible time. These discussions, which also could include direct discussions with the Office of Science and Technology Policy and NASA, should address claimed operational and spectrum requirements, sharing possibilities, reallocation of spectrum from federal to non-federal use, and whether inter-satellite service should be treated as a primary service in the bands.

Respectfully submitted,

Handwritten signature of Robert L. Pettit, with the initials "mxB" at the end.

Robert L. Pettit

Attachment

³ Matheson and Steele, NTIA ITS Staff Study, May 1993, p. 82 (copy attached).

⁴ Whatever the technical merits of a one-sided spectrum sharing study hurriedly conducted by NASA this past April, the claimed federal requirement for the spectrum was not evaluated.

FCC Commissioners

July 9, 1996

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cc: William Caton
Blair Levin
Jackie Chorney
Lauren Belvin
Rudolfo Baca
Jane Mago
Suzanne Toller
David Siddall
Michele Farquhar
Donald Gips

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ITS STAFF STUDY

A Preliminary Look at Spectrum Requirements for the Fixed Services

Robert J. Matheson
F. Kenneth Steele

U.S. Department of Commerce
Institute for Telecommunication Sciences
Boulder, Colorado

May 1993

2.32 Usage in the 25.525-27.5 GHz Band Government Service

Typical users. This Federal Government band is virtually unused, having recently a total of 11 developmental and experimental assignments. The Navy is the major user, testing shipboard electronic systems.

Comments. This band is currently above the threshold of commercial viability, and no commercial systems have been installed in the band.

Estimate of Future Growth. This band will probably grow substantially in the future. However, it is not clear to what services this band will be allocated by the time that growth occurs.

2.33 Usage in the 27.5-29.5 GHz Band Public Service

Typical users. This band is allocated to public (common carrier) microwave service, using bandwidths up to 220 MHz. Out of a total of 53 assignments, 42 are for NASA. The NASA assignments are associated with tests and development of the 28-GHz antennas and systems for the Advanced Communicating Technology Satellite (ACTS).

Recent trend in number of assignments. This band is essentially unused.

Comments. This band was--until recently--higher in frequency than the present state of the art for commercial equipment, and no systems have been moved into this band yet. A recent NPRM⁹ proposes using this band for Local Multipoint Distribution Service (LMDS--sometimes called 'cellular cable'). The NPRM proposes dividing the band into two blocks of 1000 MHz. Each block would allow 50 channels of 20 MHz each, for TV distribution to subscribers who use directional antennas. The NPRM also permits two-way video, data, and voice.

Estimate of future growth. This band will probably be used extensively in the future, as a cellular cable band and possibly as a satellite band.

2.34 Other bands of interest

38 GHz. The 38-GHz band is being mentioned often as a band that will furnish the microwave backbone for future PCS systems. Several manufacturers are already delivering 38-GHz microwave systems in substantial numbers to British companies, who are installing prototype PCS systems linked together using the 38 GHz band. This market has not yet materialized in the US, except for a small number of ENG relays.

⁹Rulemaking to Amend Part 1 and Part 21 of the Commissions's Rules to Redesignate the 27.5-29.5 GHz Frequency Band and to Establish Rules and Policies for Local Multipoint Distribution Service. CC Docket No. 92-297.